



Healthcare Analytics in Navy Medicine

Perspectives and Methods for Decision-Making

FOCUS ON M2 MIGRATION

M2 Migration to WEBI and WEBI-RC

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Desktop Intelligence (DESKI) in M2 will be disconnected during FY 2015, as it will no longer be supported by SAP Business Objects. In light of this migration to Web Intelligence (WEBI) and Web Intelligence Rich Client (WEBI-RC), this abbreviated issue of *Healthcare Analytics* will focus on topics related to the migration and its effects on analysts, managers, and anyone obtaining data from M2.

Currently, the MHS Data Mart (M2) and the M2 Restricted Universes can be queried using DESKI, WEBI, or WEBI-RC. DESKI is a “desktop” component of SAP Business Objects that has to be installed on a user’s machine to query M2 data, while WEBI is a completely web-based version of SAP Business Objects that requires no installation but is more limited in its functions. WEBI-RC is a hybrid of DESKI and WEBI, and while it requires a small installation component, it has almost the same breadth of functionality as DESKI. Any report built in WEBI-RC can be opened in WEBI and vice versa; however, WEBI and WEBI-RC reports are not compatible with DESKI reports, highlighted by the fact that they have a different file extension.

During the upcoming migration from BOXI Release 3 (R3) to BOXI Release 4.1 (R4.1) DESKI will be discontinued and WEBI and WEBI-RC will be upgraded to R4.1. This upgrade to R4.1 will include some increased functionality over older versions of WEBI-RC, such as enabling users to group variables into “buckets” instead of the current method of writing ‘if-then-else’ statements. DESKI’s User Defined Objects (UDOs) will not be available in WEBI or WEBI-RC; however, in

preparation for this loss of functionality, the M2 Functional Proponency Group (FPG) is soliciting commonly used UDOs from the M2 community and adding them to M2 as new objects in the universes so that users can continue building the same reports in WEBI-RC as in DESKI.

As DESKI approaches obsolescence, M2 users will need to convert current DESKI reports to WEBI or WEBI-RC to run queries and extract data from M2 before the migration. The importance and value of M2 users being able to open and view existing DESKI reports and the queries inside them (after the connection between DESKI and the M2 Universes has been severed) has been communicated to the migration team. To date, it is unclear if this archive functionality will be possible to maintain with the other changes occurring in the migration.

In preparation for the migration to WEBI/WEBI-RC, M2 analysts and decision makers should decide which reports are vital to their mission and set aside time so that analysts can recreate them in WEBI or WEBI-RC. There are a number of available resources for analysts that range from in-person courses and DCOs to existing corporate reports, instructional materials, and guides available in the Infoview “Public Folders” (all of which are highlighted in detail in this issue) and the upcoming M-81 SharePoint site.

There is always a learning curve associated with a migration to a newer system, but the improved hardware and the upgraded, web-based BOXI R4.1 software should improve the functionality of M2. The ability to access M2 from anywhere, without needing an installation component with WEBI, and keeping most of the functionality of DESKI through WEBI-RC will allow for broader access at all sites and improved operability across the MHS.

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SKILLS AND METHODS

—ISSUES TO CONSIDER

With the discontinuation of DESKI during FY2015 and migration to WEBI/WEBI-RC, analysts and managers will need make assessments of their current work and communicate to stakeholders so that data and information flow supporting their missions will not be interrupted.

Issues to Consider for M2 Users

As with any migration to newer software, a learning curve should be anticipated by managers and analysts. Using the learning resources available to them, analyst will need to set aside some time to learn the functions of WEBI/WEBI-RC if they have not used these applications previously. An incremental exploration of WEBI/WEBI-RC can be achieved by rebuilding existing DESKI reports – starting with simple queries and then moving up to those reports that contain local variables, merging (i.e., linking), and other advanced querying techniques.

With the discontinuation of DESKI, and no certainty that users will be able to open their existing DESKI reports after the migration, recreating reports is an efficient way of learning WEBI/WEBI-RC. A DESKI session can be opened side-by-side with a WEBI/WEBI-RC session. In other words, in Infoview a user can select New->Desk Intelligence Document, open a DESKI report and the query panel, and then go back to Infoview and launch a WEBI/WEBI-RC session through New->Web Intelligence Document. The “SQL” button in DESKI will inform the user what class or folder was used to build the query (e.g., the SIDR Detail file), and by splitting screens, a user can pull the same result objects and filters. Please note that some variables may have changed over time, while others have been removed or added to M2; therefore, variables used previously may no longer be available or have different values. For example, in the “SIDR Detail” folder, ‘Dispositions, Raw’ no longer exists because ‘Compliance Status’ has been added to the folder, so that

a user now selects ‘Compliance Status’ equal to ‘R’ to display the equivalent of the former ‘Dispositions, Raw’.

Because M2 users often run hundreds of ad hoc queries every year, it might be difficult to prioritize them. A good secondary documentation of DESKI queries can be done in an Excel spreadsheet or Word document that contains the screenshots of the query panel (remember to use the “SQL” button so that the source of the data can be recorded) and notes on any tables within the query, filters used, or local variables built. Having a screenshot of the query with some notes about the content provides a crude methodology of documenting existing DESKI data queries and reports so that the user can replicate the reports in WEBI/WEBI-RC at a later date.

Finally, users should consider any impacts that a loss in specific DESKI functionalities will have on the migration of reports to WEBI/WEBI-RC. For example, there is no grouping function in the current version of WEBI/WEBI-RC; therefore, a local variable composed of if-then-else logic must be used, or mapping can be uploaded to M2 via the External Data Provider and merged (i.e., linked) to the data pulled. Furthermore, with respect to creating variables, only local variables (i.e., those that are built inside the report using the selected results objects) are supported by WEBI/WEBI-RC. User Defined Objects (UDOs), which are built and stored outside of a report and stored on a user’s machine, are no longer available in WEBI/WEBI-RC. In DESKI, UDOs are used to create linkages before the data are queried and to link reports (as you cannot link local variables) after multiple queries are run. For example, for building episodes, a user can create UDOs of ‘Person ID + Date’ for multiple data types and link them together to build an episode of care. When reviewing current DESKI reports, an M2 user must evaluate whether UDOs were used in the original report and if the report can be rebuilt without them. The M2 Functional Proponency Group (FPG) has added, and is still soliciting, new variables that are frequently used UDOs. The intention is to add these commonly used variables to classes in the M2 Universes so that users can continue to use these linkages in the absence of the UDO functionality.

Issues to Consider for M2 Stakeholders

Decision-makers and other stakeholders who use data and information obtained from M2 will primarily need to recognize that there is a learning curve associated with a migration to newer software. Recognizing these possible constraints and providing additional time and



resources to learn new functionalities will not only abbreviate the learning curve but also strengthen the cohesion of the M2 community. Also, many M2 users will need to devote a portion of their time to documenting existing DESKI reports and/or recreating them in WEBI/WEBI-RC, requiring more time to complete data extractions and create data tables. To engender a more productive migration of reports from DESKI to WEBI/WEBI-RC, M2 stakeholders should communicate which data or existing reports are a priority for continued use and which might be obsolete or intermittently needed. Migration from DESKI to WEBI/WEBI-RC should be started now to avoid a time crunch when the end of DESKI availability is announced.

DATA AND INFORMATION SYSTEMS

— RESOURCES FOR THE M2 MIGRATION

This article will provide a brief overview of resources available to M2 users in Infoview under “Public Folders” and on the soon-to-be-launched Navy Medicine-sponsored M-81 SharePoint site, which can be accessed by anyone with a valid CAC.

Infoview – Public Folders

There are a number of resources available in the Infoview “Public Folders” directory for M2 users. The public folders contain a variety of helpful materials, such as instructional materials and pre-built corporate documents, that can be used or modified to fit an M2 user’s needs. Within these public folders, some of the directories and resources that are helpful for users who are transitioning from DESKI to WEBI-RC, or who are just starting to use M2, are listed below by folder name.

Under Public Folders/M2/Navy:

- Analytics Newsletter
 - The “Tips and Tricks” section of the Healthcare Analytics in Navy Medicine newsletter provides hands-on demonstrations and examples of WEBI-RC, as well as useful Excel tools.
- BUMED
 - This folder contains course materials from numerous “M2 Analytics” training courses, which include explanatory PowerPoint slides, handouts, pre-built reports, and solution sets that cover everything from

setting preferences for WEBI-RC to creating variables, merging (i.e., linking), subquery, and uploading external data to M2. This folder also includes the complete course materials from the “Foundations in the Practice of Analytics” course, which provides an introduction to writing a query in M2 and an overview of the data available in M2.

Under Public Folders/M2/TMA-HA:

- Courses/WISDOM/M2 Quick Guides
 - The “M2 WEBI-RC Functional Quickguide” is a two-page guide that succinctly covers various functionalities in WEBI-RC, including setting preferences, creating variables, merging (i.e., linking), and creating a subquery.
 - The “M2 Quickguide” is a two-page primer which provides a quick reference on the types of data available in M2, including descriptions of record-level data and commonly used fields.
- Tricks and Tips
 - This folder contains short, focused tutorials on single topics concerning WEBI and WEBI-RC. Examples include: “How to Create a Graph Using the Data in a Report” and “How to Merge Titles on Multiple CPT Codes”.
- Courses/WISDOM/May 2014
 - This folder includes all course materials from the most recent WISDOM course, which includes several instruction blocks on WEBI-RC. The folder name will change to reflect the training month for the materials.
 - “Day 1” includes “Business Objects Part 1” and “Business Objects Applications”, which cover setting preferences to WEBI vs WEBI-RC, basic querying, data manipulation, saving queries to your personal computer, and exporting queries to the repository.
 - “Day 2” includes “Business Objects Part 2”, which describes how to build local variables, run multiple queries in one report, and how to combine queries.
 - “Day 3” includes “Business Objects Part 3”, which examines the following techniques: merging (i.e., linking), subquery, and uploading external data into M2.



- “Day 4” includes “Workload Data”, which has a sampling of how data are queried to calculate common types of workload.
- Courses/WISDOM/WISDOM DCO Refreshers
 - This folder includes recorded Direct Connect Online sessions (DCOs) that integrate information on multiple data topics with how to pull these data from M2. Furthermore, there are DCOs on WEBI-RC specific topics such as:
 - Combining Queries
 - Formatting and Graphing
 - WEBI and DESKI Using Personal Data Files
 - WEBI for DESKI Users
 - WEBI (RC) Business Objects Part II
 - WEBI Variable Editor
 - WEBI-RC Intermediate
 - Corporate Documents (Reports)
- Corporate Reports Handbook
 - This folder contains the “Corporate Reports Handbook”, which documents the full name, abbreviated name, and description of each corporate report available in the “Public Folders/M2/TMA-HA” directory. These reports were created for the M2 community to answer common and difficult questions posed by decision-makers. These corporate reports are a great resource for new and seasoned users, as they can significantly reduce an analyst’s workload in building a new report. Note that many of these reports are being rewritten from DESKI to WEBI/WEBI-RC.
- Case Mgmt/Medical Mgmt/WEBI-RC
 - This corporate report folder contains pre-built, patient-level reports that may be useful for the management of patient populations. All reports in this folder have been transitioned to WEBI-RC. Specific reports available include:
 - Heavy ER Users
 - Inpatient Utilization Rates
 - Length of stay
 - Outpatient Utilization Rates
 - Preventative Admissions
 - Staffing (FTEs)
 - Diabetics
- Data Quality/WEBI
 - This corporate report folder contains pre-built reports that are useful for the management of data quality requirements. All reports in this folder have been transitioned to WEBI. Specific reports available include:
 - Nurse and Tech Encounters with Invalid E&M Codes
 - Immunizations with Improper E&M Codes
 - Injury Diagnosis Codes with no Injury Cause Code
 - Incorrectly Coded TCONs by Nurses and Technicians
 - Encounters for Male Patients with Female Diagnosis Codes
 - Encounters for Females Patients with Male Diagnosis Codes
 - Maternity Diagnosis Codes for Non-Maternity Patients
 - Adult Diagnosis Codes in Pediatric Patients
 - Pediatric Diagnosis Codes in Adult Patients
 - Newborn Diagnosis Codes in Older Patients
 - Questionable Admissions based on Primary Diagnosis
 - Ungroupable MS-DRGs
- Financial Management/WEBI-RC
 - This corporate report folder contains pre-built reports that are useful for the management of a facility’s financial resources. All reports in this folder have been transitioned to WEBI-RC. Specific reports available include:
 - Capitated Population
 - Enrollment Trends
 - TEDNI ER Episodes
 - TEDNI SDS Episodes



Navy Medicine SharePoint Site for M2 Migration

In addition to the “Public Folders” directory available to M2 users, Navy Medicine is in the process of modifying their M-81 SharePoint site to include a section for the M2 community (both users and stakeholders). This dedicated “M2 Migration” section will contain resources that will aid in the migration from DESKI to WEBI and WEBI-RC, and, eventually, the migration from BOXI R3 to BOXI R4.1. This site will also provide a venue of communication for analysts after the migration is complete.

Anyone with a valid CAC will be able to gain access to the SharePoint site; therefore, all the resources posted on the site will be available to not only current M2 users, but also to those who are in the process of obtaining an account or who utilize data from M2. This platform will include a discussion forum and serve as a centralized point for dialogue between members of the M2 community. Users can post questions, share solutions and tips for WEBI and WEBI-RC functionality, and provide helpful suggestions for converting reports from DESKI to WEBI or WEBI-RC. This site will also include many of the useful resources available in the Info-view “Public Folders” directory, as well as a variety of other useful resources such as upcoming in-person and online training opportunities and compiled Frequently Asked Questions (FAQs).

An M2 blaster email that includes more information, including the URL, will be sent once the site is live.

KNOWLEDGE SOURCES

— WISDOM REFRESHER DCO SESSIONS

Below are online resources for professional training and development.

In addition to the WISDOM course, DHA sponsors a one-hour refresher session on various topics through the use of Defense Connect Online (DCO). These monthly “WISDOM Refresher” webinars are offered at 9 a.m. EST and again at 5 p.m. EST, usually on every last Wednesday of the month. Included below are links to recorded sessions, as well as the schedule of upcoming sessions, that may be useful as the M2 community prepares for the M2 migration.

Recorded Sessions

Recorded sessions of WISDOM Refresher DCO sessions that contain specific information about WEBI

and WEBI-RC techniques are noted below. To view the recordings, you must have an account on DCO that is linked to your CAC. To create an account, go to <https://www.dco.dod.mil>, and click on “Create account using CAC”.

- Intro to Business Objects, WEBI-RC
<https://connect.dco.dod.mil/p4jf68d1ura/>
- Intermediate WEBI-RC
<https://connect.dco.dod.mil/p6ailpvlthi/>
- WEBI Variable Editor
<https://connect.dco.dod.mil/p7wn705gs7f/>
- Combined Queries in WEBI
<https://connect.dco.dod.mil/p57ira6i0sh/>
- Intro to WEBI for DESKI Users
<https://connect.dco.dod.mil/p3ciu809nci/>
- WEBI for DESKI Users Part 2
<https://connect.dco.dod.mil/p7v844jd392/>
- WEBI-RC Formatting Reports and Graphing
<https://connect.dco.dod.mil/p7mq6bgf9l5/>
- CAPER RVUs with examples in WEBI-RC
<https://connect.dco.dod.mil/p7pkcxfzm99/>
- Universe changes, WEBI-RC Demos, Tips and Tricks
<https://connect.dco.dod.mil/p1wffqsiu56/>

Upcoming WISDOM Refresher DCOs

The following topics will be covered in the upcoming months:

- Medical Homes - October 29, 2014
- BOXI/M2 Update – November 19, 2014
- Business Objects Topic – December 17, 2014

Please check the WISDOM webpage (<http://tricare.mil/tma/dhcape/data/wisdom.aspx>) for updates regarding DCO topics and times. To get notifications about upcoming monthly WISDOM DCO Refresher classes, sign up for M2 blasters at <https://public.govdelivery.com/accounts/USMHS DHSS/subscriber/topics>.



IN THE NEXT ISSUE

The next issue of *Healthcare Analytics in Navy Medicine* will focus on the value of converging clinical and administrative data for population health management, the evaluation of programs, and research. New methods that use standardized clinical terminology and natural language processing to enhance the utility of free-form, or text, clinical information will also be discussed. Moreover, the issue will provide an overview of the Clinical Data Repository (CDR) and the types of clinical data available from this data source, including vitals, immunizations, laboratory tests and results, and pathology results.

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